# UNITED STATES DISTRICT COURT SOUTHERN DISTRICT OF NEW YORK

SECURITIES AND EXCHANGE COMMISSION,

Plaintiff,

v.

TERRAFORM LABS PTE. LTD. and DO HYEONG KWON,

Defendants.

Civil Action No. 23 Civ. 1346 (JSR)

Hon. Jed S. Rakoff

### REPLY IN SUPPORT OF DEFENDANTS' MOTION TO EXCLUDE THE OPINIONS <u>AND TESTIMONY OF DR. MATTHEW EDMAN</u>

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Defendants<sup>1</sup> respectfully submit this Reply in support of their motion to exclude the opinions and testimony of Dr. Matthew Edman.

#### **INTRODUCTION**

The SEC's Opposition avoids responding in any material fashion to the deficits in Dr. Edman's expertise and methodology and the evidence contradicting his opinions.<sup>2</sup> Although it is the proponent of Dr. Edman's opinions and so must prove him qualified, the SEC cannot make this showing in light of Dr. Edman's lack of experience in financial payment systems (including how transactions are "processed and settled" on financial payment systems). So the SEC tries to dodge its own failure by arguing that Defendants have the burden of disproving his qualification. The remainder of the SEC's arguments attempt to create distance from Dr. Edman's deposition testimony using his sur-rebuttal and blaming Defendants and Mr. Unny for Dr. Edman's failures. Even putting aside why the analysis in the sur-rebuttal was not in Dr. Edman's original report, the SEC's arguments fail.

#### **ARGUMENT**

# I. The SEC's Bid to Obscure the Relevant Topic and Dr. Edman's Qualifications Fails Ignoring the stated assignment of its own proposed expert, the SEC's attempt to mischaracterize the relevant topic as

(Opp. 10) fails. An expert witness's qualifications are determined "by comparing the area in which the witness has superior knowledge, skill, experience, or education with the subject matter of the witness's testimony." *Faulkner v. Arista Recs., LLC*, 46 F. Supp. 3d 365, 375 (S.D.N.Y. 2014). Given the subject matter of Dr. Edman's testimony, the relevant topic is whether and how Chai, as a financial payment system, processed and settled transactions. Chai's interaction with the blockchain is only one element of a broader system that processes transactions

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<sup>&</sup>lt;sup>1</sup> Capitalized terms not defined herein have the meanings set forth in Defendants' Memorandum in Support of Defendants' Motion to Exclude the Opinions and Testimony of Dr. Matthew Edman at 11 n.7 ("Edman Daubert Mot."), ECF No. 97. References to the SEC's Opposition to Defendants' Motion to Exclude Opinions and Testimony of Dr. Matthew J. Edman, ECF No. 110, are in the form "Opp. xx."

<sup>&</sup>lt;sup>2</sup> The SEC's Opposition rings hollow given that it did not rely on nor cite Dr. Edman's report or testimony in its motion for summary judgment.

<sup>&</sup>lt;sup>3</sup> (Unless otherwise indicated, internal citations and quotation marks are omitted, and emphasis is in the original.)

in that financial payment system. Thus, in order to opine as to the narrower question of whether or not transactions were processed and settled on the blockchain, an expert would first need to examine the design and operation of the Chai payment system. Dr. Edman's experience in analyzing cybersecurity risk and how cryptocurrency is used for things like ransomware payments does not qualify him as an expert on the operation of a financial payment system.

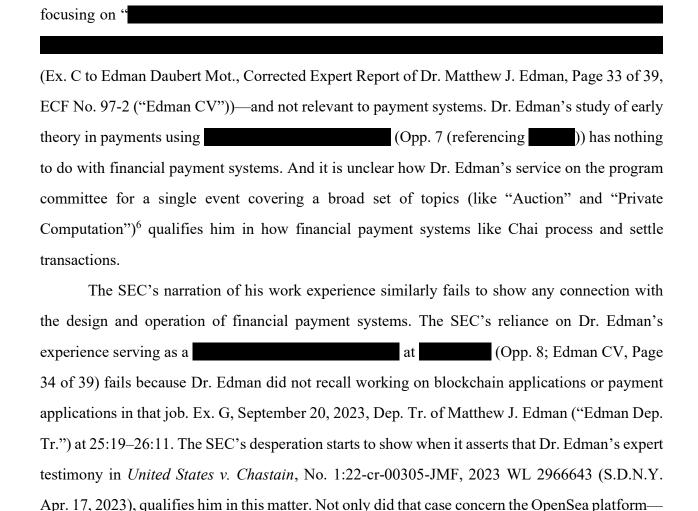
At the outset, the SEC's assertion that Defendants that would qualify someone to be an (Opp. 6) is incorrect. Under the Federal Rules of Evidence, Dr. Edman needs at least some expertise or experience in financial payment systems that interact with the blockchain to opine as to how transactions are "processed and settled" on financial payment systems, which as described further below, he is unable to do.<sup>4</sup> The SEC tries to avoid this issue by misleadingly asserting that requiring Dr. Edman to be qualified in such systems is Opp. 6.

However, this argument inverts the necessary analysis. Chai's interaction with the blockchain is only one part of the Chai payment system and how it processes and settles transactions between users and merchants. See infra Section II.A. Dr. Edman's experience with forensic blockchain analysis does not qualify him to opine about other aspects of Chai that are required to process and settle transactions. Likely for this reason, the SEC fails to acknowledge Defendants' case law showing that Dr. Edman's experience with one aspect of Chai would not qualify him as "an expert in [its] design" or operation. Jinn v. Sig Sauer, Inc., No. 1:20-cv-01122-PGG-RWL, 2023 WL 2919558, at \*7 (S.D.N.Y. Apr. 12, 2023) (collecting cases).<sup>5</sup>

The SEC then misconstrues his education and experience to try to hide Dr. Edman's lack of experience with financial payment systems. Dr. Edman's Ph.D study is highly specialized—

<sup>&</sup>lt;sup>4</sup> Dr. Edman's repeated failure to put forth any kind of workable framework or definition for how payments are "processed and settled," despite opining on the "processing and settlement" of Chai transactions, further demonstrates that he is not qualified. *See infra* Section II.B.

<sup>&</sup>lt;sup>5</sup> The SEC's argument that Dr. Edman is able to opine as to a financial payment system like Chai because he is misses the mark. Opp. 6–7. Payment systems like Chai and how they process and settle transactions is a completely different <u>field of</u> study from . Otherwise, any expert in would qualify as an expert in any product that how, which is not the law. *See Jinn*, 2023 WL 2919558, at \*7. no matter



(Opp. 8) and support of (id. at 9)—all of which involve analyzing cybersecurity risk that has nothing to do with the opinions he offers in this matter.

investigations—with the SEC referencing Dr. Edman's

which is not a financial payment system—but Dr. Edman acknowledged that he never reviewed

the source code and only analyzed "certain smart contracts." Edman Dep. Tr. at 43:17–23. The

remainder of Dr. Edman's experience that the SEC cites to relates to forensic blockchain

Having experience with forensic blockchain investigations does not translate into expertise

<sup>&</sup>lt;sup>6</sup> See Conference Program, IFCA's Conference on Financial Cryptography and Data Security, https://bit.ly/3srdzzU (last accessed November 10, 2023).

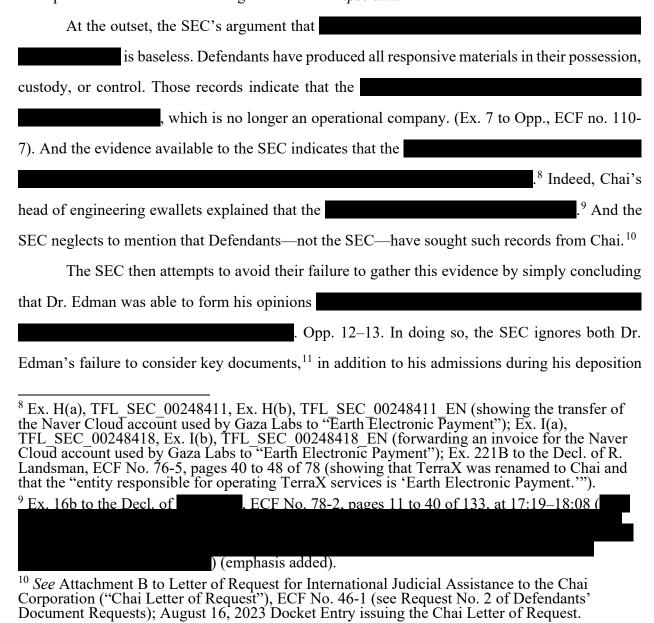
<sup>&</sup>lt;sup>7</sup> "Smart contract" is a term that is commonly "used to describe computer code that automatically executes all or parts of an agreement and is stored on a blockchain-based platform." Harvard Law School Forum on Corporate Governance, *An Introduction to Smart Contracts and Their Potential and Inherent Limitations* (May 26, 2018), https://bit.ly/49rJWiz.

as to how a financial services payment system like Chai is designed, operates, or processes and settles transactions. The SEC's arguments thus fail and Dr. Edman's opinions should be excluded.

#### II. The SEC's Arguments that Dr. Edman's Opinions Are Reliable Fail

## A. Dr. Edman's *Ipse Dixit* Does Not Resolve His Failure to Consider the Requisite Inputs or Other Components of Chai

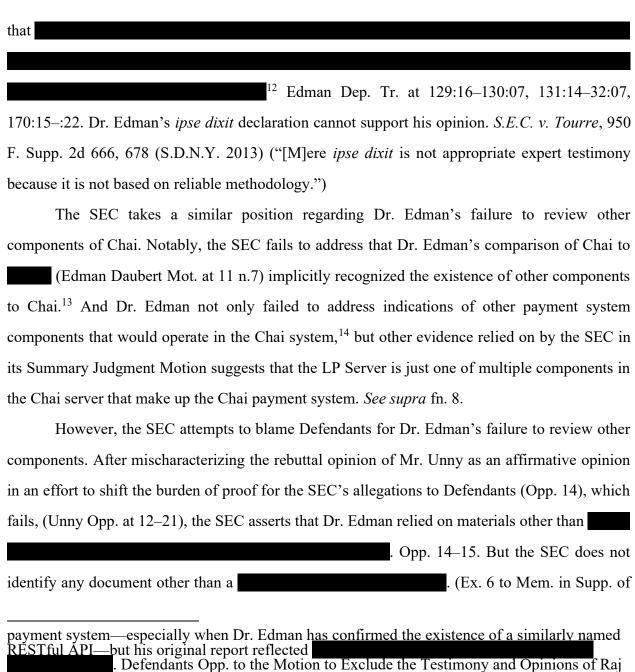
Admitting that the inputs are required and that Dr. Edman failed to review them, the SEC first blames Defendants for its failure to obtain the necessary evidence to prove its case and then attempts to conceal the error through Dr. Edman's *ipse dixit*.



other files in these documents that indicate the existence of other components in the Chai

and

<sup>11</sup> Dr. Edman not only failed to address references to the



Defendants Opp. to the Motion to Exclude the Testimony and Opinions of Raj Unny ("Unny Opp.") at 18–20, ECF No. 109.

<sup>&</sup>lt;sup>12</sup> The SEC again omits key deposition testimony in asserting that Dr. Edman was able to determine who was providing the inputs. Right after the portion of the deposition transcript cited by the SEC (Edman Dep. Tr. at 147:20–149:11) Dr. Edman admitted that the inputs could be from *Id.* at 149:12–150:08 (emphasis added).

<sup>&</sup>lt;sup>13</sup> Unny Opp. at 18 (discussing PayPal).

<sup>&</sup>lt;sup>14</sup> See Unny Opp. at 18–20. Although the SEC improperly attempts to shift the burden to Defendants and Mr. Unny to prove that these files were used in the Chai payment system, the burden is actually on the SEC to show that Dr. Edman's opinion accounted for other components of the Chai payment system that may have interacted with the LP Server and did not err when basing his decision entirely on his review of

Because Dr. Edman's failure to review data inputs to the LP Server and other Chai components renders his opinion unreliable, it should be excluded. *Hill v. Quigley*, 336 F. Supp. 3d 283, 298–99 (S.D.N.Y. 2018) (precluding expert testimony on audio and voice identification where an expert only analyzed volume and pitch but failed to conduct a "full" voice identification analysis); *New York v. Deutsche Telekom AG*, 419 F. Supp. 3d 783, 788–90 (S.D.N.Y. 2016) (excluding as unreliable an analysis based on too small of a sample size of data).

## B. The Definition of Processing and Settlement Offered by Dr. Edman Renders his Opinion Irrelevant and Unreliable

In attempting to remedy Dr. Edman's failure to offer a workable framework for "processing and settling" transactions, the SEC reveals the weakness of Dr. Edman's opinion and further exposes him as unqualified. The SEC, as the proponent of Dr. Edman, must show that his "testimony is relevant and will assist the jury." *Capri Sun GmbH v. Am. Beverage Corp.*, 595 F. Supp. 3d 83, 119 (S.D.N.Y. 2022). However, in light of the SEC's position as to Dr. Edman's interpretation of "processing and settlement," his opinion is irrelevant, meaningless, and thus too misleading to be admissible.

At the outset, Dr. Edman's failure to offer a definition of "processing and settlement" used in the field of financial payment systems demonstrates that his opinion is irrelevant to this case. The SEC's securities fraud claim related to the "Chai" payment system centers around allegations that Defendants falsely represented that Chai used the Terra blockchain to "process and settle" transactions between its users and merchants. AC ¶¶ 5, 118, 121, 126. The only way to determine whether the alleged misrepresentations are false is to use the meaning of "processing and settlement" as it is understood and used in the financial payment system under analysis. The SEC

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<sup>&</sup>lt;sup>15</sup> In contrast, Mr. Unny correctly refuses to speculate about this document. Unny Opp. at 20–21.

recognized this fact when it initially offered Dr. Edman's report and testimony in an attempt to make this determination. However, the SEC takes the position that Dr. Edman was using the phrase "processing and settlement" not as a but rather to Opp. 17. This concedes that Dr. Edman failed to offer a framework (let alone an industry-recognized one) for evaluating the meaning of "processing and settlement" within the Chai payment system, and simply assumed that it meant whatever the SEC alleged. Thus, Dr. Edman's failure to use the meaning of "processing and settlement" as it is understood in the context of this financial payment system renders his opinion useless to determine whether Defendants' representations were false and thus irrelevant to the SEC's claims.

Further, Dr. Edman's latest, post-opinion interpretation of processing and settlement is so broad as to render the term meaningless. Dr. Edman interpreted "processing and settlement" to Opp. 16. This meaning covers the entire scope of a transaction and does not explain what and when "possession" occurs by a merchant. Worse still, Dr. Edman cannot reliably opine that "processing and settlement" means the while simultaneously admitting to having Edman Dep. Tr. at 125:05–126:05. This interpretation renders Dr. Edman's opinion speculative and unreliable.

The SEC attempts to conceal this error by again relying on Dr. Edman's sur-rebuttal. The SEC points out that Dr. Edman finds his own interpretation of processing and settlement consistent with a single passage in the Bank of International ("BIS") report referenced by Mr. Unny. 16 Opp.

<sup>&</sup>lt;sup>16</sup> The SEC also takes out of context statements made by Mr. Unny during his deposition to try to show that he with the committee that issued the BIS Report. Opp. 18. The SEC neglects to mention that Mr. Unny knew that the BIS was "a reputable organization . . . when it comes to blockchain processing and settlement," Ex. J, Unny. Dep. Tr. at 213:12–20, and when it comes to blockchain processing and settlement," Ex. J, Unny. Dep. 1r. at 213:12–20, and confirmed that the BIS "provide[s] Central Banks with a platform for responsible innovation and knowledge sharing, in-depth analysis and insights on core policy issues, sound and competent financial services." *Id.* at 227:12–228:01. Mr. Unny further confirmed that the members of the committee include "several of the Central Banks of some of the largest economies in the world," like "the Federal Reserve Bank of New York" and "the Board of Governors of the Federal Reserve System." *Id.* at 225:08–226:15. It also includes officials from the Bank of Korea. *See* Bank for Int'l Settlements: Comm. On Payments and Market Infrastructures, "Distributed ledger

18 (citing to Ex. F to Edman Daubert Mot., Rebuttal Expert Report of Dr. Matthew J. Edman ("Edman Reb. Report") ¶ 52, ECF No. 97-5). Specifically, Dr. Edman compares his interpretation of processing and settlement—the

—to language in a BIS report stating that "transfer[] [of] digital assets in the ledger (that is, the ledger is recording the transfer of ownership of a specific digital asset that exists only on the ledger)." Edman Reb. Report ¶ 52. Dr. Edman then concludes, without any analysis, that these passages are consistent.

That is wrong. Dr. Edman latches onto a single passage in a twenty page BIS report discussing processing and settlement mechanisms and simply declares that his interpretation is consistent with this passage. But he ignores that the BIS rejects a "one-size-fits-all approach" for processing and settlement and only considers one definition in the BIS report without precluding other definitions. And not only does he fail to explain or provide a framework to show how his interpretation of "processing and settlement" applies to the transfer of digital assets, but outside of his conclusory declaration, he never explains how his interpretation and the BIS passage are consistent. <sup>18</sup>

Dr. Edman's failure to offer a framework (let alone an industry-recognized one) to evaluate the meaning of "processing and settlement" renders his opinion irrelevant and unreliable.

# C. The SEC Relies on Misrepresentations and Dr. Edman's Flawed Findings to Support Dr. Edman's Opinion that

In attempting to support Dr. Edman's opinion that

the SEC improperly relies on flawed analysis in Dr. Edman's sur-rebuttal, mispresents Dr.

based this conclusion on his finding that

Edman Reb. Report ¶ 53, but it is unclear how he made this determination of when he did not know 149:13–150:08, or 149:13–150:08.

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technology in payment, clearing and settlement," at 23 (Feb. 2017), https://bit.ly/46HlPL3 ("BIS Report").

<sup>&</sup>lt;sup>17</sup> BIS Report. at 9 ("The range of approaches to DLT is an indication that a one-size-fits-all approach is not appropriate to address the broad range of challenges in payment, clearing and settlement.").

<sup>18</sup> The SEC's also relies on Dr. Edman's sur-rebuttal to assert that the in the BIS report. Opp. 18. However, Dr. Edman based this conclusion on his finding that

Edman's findings, and fails to respond to Defendants' argument that Dr. Edman changed his methodology for determining "control."

The SEC's assertion that custodial wallets were definitively not used in Chai relies on Dr.
Edman's opinion, but that opinion fails to account for key evidence. Notably, Dr. Edman's reliance
on Mr. Kwon's statement that (Edman Reb.
Report ¶ 37) is undermined by his omission of Mr. Kwon's statements that
and that 20 None of the other
materials on which Dr. Edman relies provide any clarification as to whether the Chai payment
system could have been using a custodial wallet. See id. <sup>21</sup>
The SEC then erroneously relies on Dr. Edman's flawed opinions as to the
that Dr. Edman did not address in his original report. Notably, the SEC fails to discuss and attempts
to create distance from Dr. Edman's change of his methodology for
(Edman Daubert Mot. at 17) by asserting that
Opp. 21 n.11. However, neither document cited
supports this conclusion—one document simply shows that there were
Edman Reb. Report ¶ 19, and the other document simply
references the but includes no indication of . Ex.
K, Ex. 7 to Edman Reb. Report; Edman Reb. Report ¶¶ 19–21 (citing Ex. 7). The failure to account
for this fundamentally undermines Dr. Edman's conclusion that
Finally, the SEC attempts to avoid Dr. Edman's failure to consider in his
original report on the grounds that it
<sup>19</sup> Ex. L.
20
Further, the SEC's argument that Mr. Unny
is misleading and irrelevant. Unny Opp. at 16 n.11.

Opp. at 23. But calling the 18,354 transactions (Edman Reb. Report ¶ 64) *de minimis* does not absolve Dr. Edman of considering whether they involved interaction with the blockchain. And there is no basis in Dr. Edman's sur-rebuttal to support the SEC's statement that Opp. 23.

Dr. Edman's failure to consider the presence of custodial wallets, the Coinone wallet, and the Terra Topup constitutes a failure to adequately account for "obvious alternative explanations" for his conclusions that is grounds for his exclusion. *Am. Railcar Indus., Inc. v. GyanSys, Inc.*, 1:14-cv-08533-JSR, 2017 WL 11501888, at \*21 (S.D.N.Y. Nov. 14, 2017) (Rakoff, J.).

# D. The SEC's Argument that Dr. Edman Does Not Testify to the Intent of Chai is Belied by his Deposition Testimony

Dr. Edman clearly indicated throughout his deposition he is opining what Chai was "intended" to do. Edman Dep. Tr. at 137:04–138:06, 138:07–22, 138:23–139:18. Such testimony is impermissible. *See GeigTech E. Bay LLC v. Lutron Elecs.*, Co., No. 1:18-cv-05290-CM, 2023 WL 6614486, at \*24 (S.D.N.Y. Sept. 20, 2023).

#### **CONCLUSION**

For the foregoing reasons, Defendants respectfully request that the Court exclude the opinions and testimony of Dr. Matthew Edman.

Date: November 10, 2023 Respectfully submitted,

/s/Mark G. Califano

#### **DENTONS US LLP**

Douglas W. Henkin
David L. Kornblau
Louis A. Pellegrino
1221 Avenue of the Americas
New York, New York 10020
Tel: (212) 768-6700
douglas.henkin@dentons.com
david.kornblau@dentons.com
louis.pellegrino@dentons.com

Mark G. Califano
Melissa Gomez-Nelson (admitted *pro hac vice*)
Matthew A. Lafferman (admitted *pro hac vice*)
1900 K Street, NW
Washington, DC 20006
Tel: (202) 496-7500
mark.califano@dentons.com
melissa.gomeznelson@dentons.com
matthew.lafferman@dentons.com

Counsel for Defendants Terraform Labs Pte. Ltd. and Do Hyeong Kwon

## **CERTIFICATE OF SERVICE**

I, Mark G. Califano, certify that I caused a true and correct copy of the foregoing to be served on all counsel of record via the Court's ECF system on November 10, 2023.

/s/ Mark G. Califano Mark G. Califano